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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,298	10/16/2001	Ryuichiro Maeyama	110894	4681

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EXAMINER	
KRUER, KEVIN R	

ART UNIT	PAPER NUMBER
1773	9

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/977,298	MAEYAMA ET AL	
	Examiner	Art Unit	
	Kevin R Kruer	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *22 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) *1-8,17,18,22 and 23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-16,19-21,24 and 25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. Applicant's election with traverse of claims 1-8, 17, 18, 22, and 23 in Paper No. 8 is acknowledged. The traversal is on the ground(s) that the examiner has failed do show that the search for Group II is a serious burden. This is not found persuasive because the search for the method would require a number of subclasses to be searched that will not be searched during the prosecution of the product claims.

The requirement is still deemed proper and is therefore made FINAL.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 9-13, 16, 19, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki (US 6,336,025B1) in view of Buchan et al (US 3,923,392). Saeki teaches an endless intermediate transfer belt (abstract). The transfer belt should have a volume resistivity in the range of 10^8-10^{12} ohm*cm and a surface resistivity in the range of 10^8-10^{15} ohm*cm (col 7, lines 29+). The intermediate transfer belt comprises a resin material such as PVDF, ETFE, polyimide or polycarbonate and a dispersed electrical conductive material (col 15, lines 58+). The belt is centrifugally molded from

the blend of resin and conductive material (col 16, lines 33+). The belt may be utilized in an image forming apparatus comprising a photoreceptor, a charging advice, the intermediate transfer belt described above, and a transfer roller (col 6, lines 48+)

Saeki does not teach that the transfer belt should be metallized. However, Buchan teaches that the heat absorption of a transfer belt can be eliminated or substantially diminished by coating it with a thin reflecting layer such as aluminum (col 4, lines 1+). Therefore, it would have been obvious to one of ordinary skill in the art to apply a coat of aluminum to the intermediate transfer belt taught in Saeki in order to eliminate or substantially diminish the heat absorption of the belt.

With regards to the claimed method limitations, the examiner takes the position that the method of making a product does not patentably distinguish a claimed product from a product taught in the prior art unless it can be shown that the process inherently results in a materially different product. In the present application, the examiner takes the position that the product that is rendered obvious by Saeki in view of Buchan reads on the claimed invention because it comprises the same layers and the same compositions as the claimed laminate.

5. Claims 9-14, 16, 19, 20, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasagawa et al (US 6,376,594B1) in view of Buchan et al (US 3,923,392). Sasagawa teaches a conductive member that is formed of a polymeric base material and conductive filler (abstract). The density of conductive filler in a portion of the conductive member is lower than that in the remaining portion or substantially zero (abstract). The polymeric base material may comprise elastomers, polyurethane,

silicone rubber, polyamide, polyethylene terephthalate, polyimide, and polyester (col 6, lines 17+). The filler may comprise any electrical conductive material such as carbon black and metal (col 5, lines 21+). The composition may further comprise ionic conducting fillers and carbon black dispersants (col 2, lines 26+)-herein relied upon to read on the "plurality of dispersed materials" of claims 24 and 25. The conductive member may be made by centrifugal molding and may be used as a transfer member (col 12, lines 52+).

Sasagawa does not teach that the transfer belt should be metallized. However, Buchan teaches that the heat absorption of a transfer belt can be eliminated or substantially diminished by coating it with a thin reflecting layer such as aluminum (col 4, lines 1+). Therefore, it would have been obvious to one of ordinary skill in the art to apply a coat of aluminum to the intermediate transfer belt taught in Sasagawa in order to eliminate or substantially diminish the heat absorption of the belt.

With regards to the claimed method limitations, the examiner takes the position that the method of making a product does not patentably distinguish a claimed product from a product taught in the prior art unless it can be shown that the process inherently results in a materially different product. In the present application, the examiner takes the position that the product that is rendered obvious by Saeki in view of Buchan reads on the claimed invention because it comprises the same layers and the same compositions as the claimed laminate.

6. Claims 9-13, 16, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki (US 6,336,025B1) in view of Goto (US 5,172,173). Saeki

teaches an endless intermediate transfer belt (abstract). The transfer belt should have a volume resistivity in the range of 10^8-10^{12} ohm*cm and a surface resistivity in the range of 10^8-10^{15} ohm*cm (col 7, lines 29+). The intermediate transfer belt may comprise a resin material such as PVDF, ETFE, polyimide or polycarbonate wherein an electrical conductive material has been dispersed (col 15, lines 58+). The belt is made by supplying the blend of resin and conductive material into centrifugal mold and molding (col 16, lines 33+). The belt may be utilized in image forming apparatus, such as the one in FIG 1.

Saeki does not teach that the transfer belt should be metallized. However, Goto teaches that an electrical conductive layer can be provided on the back of a dielectric transfer belt material in order to eliminate the problem of the seam and reduce the occurrence of the "charge-up " phenomenon (col 3, lines 16+). The conductive layer may comprise a vapor deposited aluminum, gold, or tin oxide layer (col 2, lines 39+). Thus, it would have been obvious to one of ordinary skill in the art to apply an electrically conductive layer to the back of a dielectric transfer belt of Saeki in order to eliminate the problem of the seam and reduce the occurrence of the "charge-up " phenomenon.

7. Claims 9-14, 16, 19, 20, 24, and 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasagawa et al (US 6,376,594B1) in view of Goto et al (US 5,172,173). Sasagawa teaches a conductive member that is formed of a polymeric base material that contains a conductive filler (abstract). A portion of the conductive member in which the density of the conducting filler is lower than that in the remaining

portion or substantially zero (abstract) or contains a conductive filler of lower density (col 3, lines 45+). The polymeric base material may comprise elastomers, polyurethane, silicone rubber, polyamide, polyethylene terephthalate, polyimide, and polyester (col 6, lines 17+). The filler may comprise any electrical conductive material such as carbon black and metal (col 5, lines 21+). The conductive member may be made by centrifugal molding and may be used as a transfer member (col 12, lines 52+).

Sasagawa does not teach that the transfer belt should be metallized. However, Goto teaches that an electrical conductive layer can be provided on the back of a dielectric transfer belt material in order to eliminate the problem of the seam and reduce the occurrence of the "charge-up " phenomenon (col 3, lines 16+). The conductive layer may comprise a vapor deposited aluminum, gold, or tin oxide layer (col 2, lines 39+). Thus, it would have been obvious to one of ordinary skill in the art to apply an electrically conductive layer to the back of a dielectric transfer belt of Saeki in order to eliminate the problem of the seam and reduce the occurrence of the "charge-up " phenomenon.

8. Claims 15, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasagawa et al (US 6,376,594B1) in view of Goto et al (US 5,172,173) or Buchan et al (US 3,923,392), as applied above, and further in view of Ohtani et al (US 5,534,581). Sasagawa in view of Goto or Buchan is relied upon as above, but does not teach that the conductive particles may comprise conductive polymers. However, Ohtani teaches a transfer material comprising a matrix resin and a conductive particle (abstract) wherein the conductive particles may comprise carbon

black, metal particles, metal oxide particles or conductive resin particles (col 8, lines 35+). Therefore, it would have been obvious to utilize conductive resin particles as the conductive particle taught in Sasagawa because Ohtani teaches such particles can be utilized to give transfer materials the desired conductivity.

With respect to claims 24 and 25, Sasagawa does not teach that a blend of particles may be utilized. However, Ohtani teaches that the particles may be utilized in a blend (col 8, lines 63+). Thus, it would have been obvious to one of ordinary skill in the art to utilize a blend of particles as the conductive particles of Sasagawa because Ohtani teaches such blends are sufficient for giving transfer materials the desired conductivity.

9. Claims 14, 15, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki (US 6,336,025B1) in view of Goto et al (US 5,172,173) or Buchan et al (US 3,923,392), as applied above, and further in view of Ohtani et al (US 5,534,581). Saeki in view of Goto or Buchan is relied upon as above, but does not teach that the conductive particles may comprise conductive polymers. However, Ohtani teaches a transfer material comprising a matrix resin and a conductive particle (abstract) wherein the conductive particles may comprise carbon black, metal particles, metal oxide particles or conductive resin particles (col 8, lines 35+). Therefore, it would have been obvious to utilize conductive resin particles or metal particles as the conductive particle taught in Saeki because Ohtani teaches such particles can be utilized to give transfer materials the desired conductivity.

With respect to claims 24 and 25, Saeki does not teach that a blend of particles may be utilized. However, Ohtani teaches that the particles may be utilized in a blend (col 8, lines 63+). Thus, it would have been obvious to one of ordinary skill in the art to utilize a blend of particles as the conductive particles of Saeki because Ohtani teaches such blends are sufficient for giving transfer materials the desired conductivity.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP57202578 teaches an antistatic belt that comprises electrically conductive particles dispersed in an elastomeric thin film. The composition is centrifugally molded.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 703-305-0025. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

K-R K-

krk
June 12, 2003

Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700